ARTICLE WITH WATER-AND OIL-REPELLENT FILM AND FORMING METHOD THEREOF

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Inventor(s): OGAWA KAZUFUMI
Applicant(s): MATSUSHITA ELECTRIC IND CO LTD
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Abstract of JP 10146920 (A)

PROBLEM TO BE SOLVED: To provide a highly water- and oil-repellent molecular membrane coated article by a method wherein an uneven layer prepared by mixing finely divided particles and a silicate glass is provided on the surface of a glass base and, in addition, a water- and oil-repellent film consisting of a fluorocarbon group and siloxane group-containing polymer layer or single molecular layer is chemically bonded onto the above-mentioned layer through a siloxane bond.
SOLUTION: By coating finely divided particles 2 and silicate glass on the surface of a glass base 1, a rough surface consisting of a layer 3 having a submicron-micron order unevenness is formed. By thinly coating fluorine-based surface active agent such as CF3 CH2 O(CH2)15 SiCl3 or the like together with nonaqueous solvent, a dehydrochlorination reaction is conducted ; Next, by removing excess surface active agent, fluorine group containing molecules are bonded to the glass base and/or the surface of the finely divided particles, resulting in obtaining a film 4 excellent in water- and oil-repellency and improving the water repellency to the water 5.